CLAIMS

1. Face detection apparatus in which an image region of a test image is compared with data indicative of the presence of a face; the apparatus comprising:

a pre-processor operable to identify low-difference regions of the test image where there exists less than a threshold image difference across groups of pixels within those regions; and

a face detector operable to perform face detection on regions of the test image other than those identified by the pre-processor as low-difference regions.

2. Apparatus according to claim 1, in which the region is a rectangular region; the pre-processor operating to identify low-difference regions only with respect to pixels in a central portion of the regions.

3. Apparatus according to claim 2, in which the central portion of a region comprises all of the region except for two strips, one at each side of the region.

4. Apparatus according to any one of the preceding claims, in which the pre-processor is operable to identify high-difference regions of the test image where there exists greater than a threshold image difference across groups of pixels within those regions; and

a face detector operable to perform face detection on regions of the test image other than those identified by the pre-processor as low-difference regions or high-difference regions.

5. Apparatus according to any one of the preceding claims, in which the face detector is operable:

to derive a set of attributes from respective blocks of a region;

to compare the derived attributes with attributes indicative of the presence of a face;

to derive a probability of the presence of a face by a similarity between the derived attributes and the attributes indicative of the presence of a face; and

to compare the probability with a threshold probability.

6. Apparatus according to claim 5, in which the attributes comprise the projections of image areas onto one or more image eigenvectors.

7. Apparatus according to any one of the preceding claims, in which the groups of pixels comprise pairs of adjacent pixels.

8. Video conferencing apparatus comprising apparatus according to any one of the preceding claims.

9. Surveillance apparatus comprising apparatus according to any one of claims 1 to 7.

10. A method of face detection, in which an image region of a test image is compared with data indicative of the presence of a face; the method comprising the steps of:

identifying low-difference regions of the test image where there exists less than a threshold image difference across groups of pixels within those regions; and

performing face detection on regions of the test image other than those identified by the pre-processor as low-difference regions.

11. Computer software having program code for carrying out a method according to claim 10.

12. A providing medium for providing program code according to claim 11.

13. A medium according to claim 12, the medium being a storage medium.

14. A medium according to claim 12, the medium being a transmission medium.